

148

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E72
CR-127744

TYPE 1 PROGRESS REPORT FOR ERTS 1 INVESTIGATION
FOR THE PERIOD ENDING JULY 31, 1972

Submitted by Y.W. Isachsen, P.I., ST 343

- a. ST-343: To evaluate ERTS-A data for usefulness as geological sensor.
- b. GSFC ID ST 343 MMC #343
- c. Neither ERTS products nor major items of equipment are yet on hand. The major equipment items necessary for our evaluation of the ERTS data have been ordered, however, with delivery dates promised as follows:

<u>Equipment</u>	<u>Delivery Date</u>
Richards Light Table	Sept. 1
Bausch and Lomb Zoom Stereoscope System	Aug. 26
Spectral Data Corp. Model 64 Multispectral viewer-projector	Sept. 22
Pantion Surveying Microbargraph	Aug. 19
Hamilton Steel Map File	Aug. 19
Bruning Engineering Copier	Aug. 19
Camera Tripod	Aug. 19

The above delivery dates were all specially negotiated, and are shorter than normal by from 28 to 50 days. This was indicated in my letter of 7/28/72 to Mr. Arista in which I stated that we would be ready to process ERTS data stereoscopically beginning August 26, and by color additive viewing by the end of September.

- d. 1. All major items of equipment have been ordered and delivery dates scheduled.
2. A large, air-conditioned room (22 x 32 ft.) has been obtained for the project, and furniture has been ordered from within the department (desks, chairs, tables, files, electric typewriter, etc.).
3. Preliminary data handling forms have been drawn up, subject to revision during Phase II.
4. The following maps (Statewide unless otherwise specified) have been assembled, and reduced to scales useful for comparisons with ERTS imagery:

Bedrock geology
Soils
Culture
Drainage

(E72-10020) TO EVALUATE ERTS-A DATA FOR
USEFULNESS AS GEOLOGICAL SENSOR Progress
Report, period ending 31 Jul. 1972 Y.W.
Isachsen (New York State Univ.) 31 Jul.
1972 2 p

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Topography

Land Use

Adirondack blow down areas

Adirondack burn areas

Oil and gas fields

Glacial geology of western New York State (in progress, completion at 1:250,000 by late fall)

Aeromagnetic map of eastern Adirondacks

Gravity Map

5. Upon receipt of ERTS and U-2 Substitution Flight data, we will begin preliminary evaluation using Geological Survey light table and single prism stereoscope. Geologically annotated overlays will be made separately of each relatively cloud-free spectral image received in the first ERTS shipment, in order to make a preliminary evaluation of the usefulness and necessity of such multiple annotation (i.e. seven per scene). These annotations will then be collated into a single "spectral geological map" of the State which will be amended and up-dated using subsequent ERTS data. Ground truth will be obtained as needed. Color additive analyses will begin upon delivery of the SDC Model 64 Viewer-projector.